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Range: from to Features: ☐ SNP ☒ CDD ☒ MGC ☒ HPRD ☒ STS ☒ tRN

☐ 1: [Q62751](#). Reports Iron-responsive e...[gi:60392492]

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LOCUS Q62751 963 aa linear ROD 01-NOV-1997
DEFINITION Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2).
ACCESSION Q62751
VERSION Q62751 GI:60392492
DBSOURCE swissprot: locus IREB2_RAT, accession [Q62751](#);
class: standard.
extra accessions: Q66HL4, xrefs: [U20181.1](#), [AAA79927.1](#), [BC081798.1](#), [AAH81798.1](#)
xrefs (non-sequence databases): UniGene:Rn.10132, Ensembl:ENSRNOG00000013271, RGD:621539, LinkHub:Q62751, InterPro:IPR012084, InterPro:IPR006249, InterPro:IPR000573, InterPro:IPR001030, Pfam:PF00330, Pfam:PF00694, PIRSF:PIRSF001417, PRINTS:PR00415, ProDom:PD000511, TIGRFAMs:TIGR01341, PROSITE:PS00450, PROSITE:PS01244
KEYWORDS 4Fe-4S; Iron; Iron-sulfur; Metal-binding; RNA-binding.
SOURCE Rattus norvegicus (Norway rat)
ORGANISM Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Rattus.
REFERENCE 1 (residues 1 to 963)
AUTHORS Guo, B., Brown, F.M., Phillips, J.D., Yu, Y. and Leibold, E.A.
TITLE Characterization and expression of iron regulatory protein 2 (IRP2). Presence of multiple IRP2 transcripts regulated by intracellular iron levels
JOURNAL J. Biol. Chem. 270 (28), 16529-16535 (1995)
PUBMED [7622457](#)
REMARK NUCLEOTIDE SEQUENCE [MRNA].
STRAIN=Sprague-Dawley; TISSUE=Liver
REFERENCE 2 (residues 1 to 963)
AUTHORS .
CONSRTM NIH - Mammalian Gene Collection (MGC) project
TITLE Direct Submission
JOURNAL Submitted (??-SEP-2004)
REMARK NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
TISSUE=Testis
COMMENT On Mar 1, 2005 this sequence version replaced gi:2492646.
[FUNCTION] Binds to iron-responsive elements (IRES), which are stem-loop structures found in the 5'UTR of ferritin, and delta aminolevulinic acid synthase mRNAs, and in the 3'UTR of transferrin receptor mRNA. Binding to the IRE element in ferritin results in

the repression of its mRNA translation. Binding of the protein to the transferrin receptor mRNA inhibits the degradation of this otherwise rapidly degraded mRNA.

[COFACTOR] Binds 1 4Fe-4S cluster per subunit (By similarity).

[SUBCELLULAR LOCATION] Cytoplasm.

[TISSUE SPECIFICITY] Ubiquitously expressed in rat tissues, the highest amounts present in skeletal muscle and heart.

[SIMILARITY] Belongs to the aconitase/IPM isomerase family.

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FEATURES	Location/Qualifiers
<u>source</u>	1..963 /organism="Rattus norvegicus" /db_xref="taxon:10116"
<u>gene</u>	1..963 /gene="Ireb2" /note="synonym: Irp2"
<u>Protein</u>	1..963 /gene="Ireb2" /product="Iron-responsive element-binding protein 2"
<u>Region</u>	1..963 /gene="Ireb2" /region_name="Mature chain" /experiment="experimental evidence, no additional details recorded" /note="Iron-responsive element-binding protein 2." /FTId=PRO_0000076686."
<u>Region</u>	85..>145 /gene="Ireb2" /region_name="Aconitase A catalytic domain" /note="AcnA_IRP" /db_xref="CDD:30082"
<u>Region</u>	107 /gene="Ireb2" /region_name="Conflict" /experiment="experimental evidence, no additional details recorded" /note="V -> M (in Ref. 1)."
<u>Region</u>	212..641 /gene="Ireb2" /region_name="Aconitase A catalytic domain" /note="AcnA_IRP" /db_xref="CDD:30082"
<u>Site</u>	512 /gene="Ireb2" /site_type="metal-binding" /inference="non-experimental evidence, no additional details recorded" /note="Iron-sulfur (4Fe-4S) (By similarity)."
<u>Site</u>	578 /gene="Ireb2" /site_type="metal-binding" /inference="non-experimental evidence, no additional details recorded" /note="Iron-sulfur (4Fe-4S) (By similarity)."
<u>Site</u>	581

ORIGIN

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Mar 14 2006 11:51:02